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ITCSIIU21091

**COMPUTER NETWORK**

**LAB 2**

1. **The Basic HTTP GET/response interaction**

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1. **Is your browser running HTTP version 1.0, 1.1, or 2? What version of HTTP is**

**the server running?**

Line 3 shows that my browser running HTTP version 1.1.

Line 2 shows that the HTTP version the server is running is 1.1

1. **What languages (if any) does your browser indicate that it can accept to the**

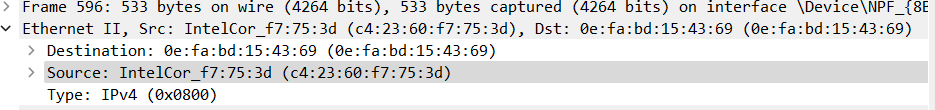
**server?** En-US

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1. **What is the IP address of your computer? What is the IP address of the**

**gaia.cs.umass.edu server?**



The IP address of my computer: IntelCor\_f7:75:3d (c4:23:60:f7:75:3d),

The Internet address of the gaia.cs.umass.edu: 0e:fa:bd:15:43:69 (0e:fa:bd:15:43:69)

1. **What is the status code returned from the server to your browser?**

200 OK

1. **When was the HTML file that you are retrieving last modified at the server?**

Use “http.last\_modified” in the display-filter-specification window.





So the HTML file that you are retrieving last modified at the server at 10:47:43.946868

1. **How many bytes of content are being returned to your browser?**

128 bytes

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1. **By inspecting the raw data in the packet content window, do you see any headers**

**within the data that are not displayed in the packet-listing window? If so, name one**

I don’t see any headers within the data that are not displayed in the packet-listing window.

1. **The HTTP CONDITIONAL GET/response interaction**

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1. **Inspect the contents of the first HTTP GET request from your browser to the server. Do you** **see an “IF-****MODIFIED-SINCE” line in the HTTP GET?**

No, I don’t see an “IF-MODIFIED-SINCE” line in the HTTP GET.

1. **Inspect the contents of the server response. Did the server explicitly return the contents of the file? How can you tell?**

A screenshot of a computer

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A close-up of a message

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The server explicitly return the contents of the file by compare the content displayed in the file and the content displayed in the browser.

1. **Now inspect the contents of the second HTTP GET request from your browser to the server. Do you see an “IF-MODIFIED-SINCE:” line in the HTTP GET? If so, what** **information follows the “IF-MODIFIED-SINCE:” header?**

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Yes, I see an “IF-MODIFIED-SINCE” line in the HTTP GET.

Information follows the “IF-MODIFIED-SINCE:” header is the date and time of my last accessed to web ( Sat, 14 Oct 2023 05:00:01 GMT\r\n)

1. **What is the HTTP status code and phrase returned from the server in response to this second HTTP GET? Did the server explicitly return the contents of the file? Explain.**

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The HTTP status code: “304 Not Modified”

The phrase returned from the server: Not Modified

The server didn’t explicitly return the contents of the file

Because this file's last modification date not change. Therefore, when i download this content multiple times on my browser, a complete copy will be sent by the server only once from its cache because the IN-MODIFIED-SINCE field is included in the HTTP request GET of my browser to the server.

1. **Retrieving Long Documents**

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1. **How many HTTP GET request messages did your browser send? Which** **packet number in the trace contains the GET message for the Bill or Rights?**

Number of HTTP GET request messages: 1

Packet number in the trace contains the GET message: 95

1. **Which packet number in** **the trace contains the status code and phrase associated with the response to the HTTP GET request?**

Packet in the trace contains the status code and phrase associated with the response to the HTTP GET request 123

1. **What is the status code and phrase in the response?**

The status code and phrase in the response: 200 OK

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Description automatically generated**



1. **How many data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights?**

Number of data-containing TCP segments were needed to carry the single HTTP response and the text of the Bill of Rights: 4

**A screenshot of a computer

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1. **HTML Documents with Embedded Objects**

**A screenshot of a computer

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1. **How many HTTP GET request messages did your browser send? To which Internet addresses were these GET requests sent?**

Number of HTTP GET request messages: 3

Internet addresses were these GET requests sent:

Pearson logo: 128.119.245.12

8th edition cover: 178.79.137.164

1. **Can you tell whether your browser downloaded the two images serially, or whether they** **were downloaded from the two web sites in parallel? Explain.**

**A screenshot of a computer

Description automatically generated**

**A screenshot of a computer

Description automatically generated**

My browser downloaded the two images serially because they have different time. If they were downloaded from the two web sites in parallel, they have to has the same time. Moreover the Pearson logo were downloaded first, after that 8th edition cover were downloaded.

1. **HTTP Authentication**

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1. **What is the server’s response (status code and phrase****) in response to the initial HTTP GET message from your browser?**

The server’s response ) in response to the initial HTTP GET message from my browser: 401 Unauthorized

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1. **When your browser’s sends the HTTP GET message for the second time, what new field is included in the HTTP GET message?**

The new field is included in the HTTP GET message: Authorization field

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